milk is then strained through cloths, mixed with half its volume of water, one-fourth the volume of cream, and the necessary amount of milk-sugar. This mixture is then bottled in vials holding 125 grammes (four ounces) and sterilized.

A second grade for older children is obtained by mixing equal parts of the predigested milk and water with half the quantity of cream and with milk-sugar. This is supplied in bottles holding 200 grammes (six and one-half ounces).

A third grade, which imitates cow's milk in composition, and is supplied in bottles holding 300 grammes (ten ounces), is prepared by a similar method of modification.

The first grade shows the following composition: Fat, 3.1; sugar, 6.0; casein, 0.6; albumin, 1.0; ash, 0.4. The second: Fat, 3.2; sugar, 5.4; casein, 1.8; albumin, 0.3; ash, 0.4. The third grade shows: Fat, 3.3; sugar, 4.8; casein, 3; albumin, 0.5; ash, 0.7.

This preparation has been tried by Frühwald in twenty cases, the histories of which are given in the paper. All excepting six were under observation for more than two months. When first put upon this mixture all were suffering from different forms of digestive trouble and from malnutrition; some were suffering from severe marasmus, and most of them passed through some other acute disease while under observation. Under one or other of these mixtures average daily gains of 18 to 30 grammes were made (about one-half to one ounce). In private practice and in healthy children a daily gain of 50 grammes (one and one-half ounces) was said not to be rare.

THERAPEUTICS.

UNDER THE CHARGE OF

REYNOLD W. WILCOX, M.D., LL.D.,

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Euphthalmin.—DR. ALBERT B. HALE states that in using mydriatics for diagnostic purposes three factors must be considered: (1) The least desirable is the action of the drug on the ciliary muscle, for however valuable this may be in estimating errors of refraction, it is always intensely disagreeable, often dangerous to the patient, and certainly unnecessary for the study of the liver or fundus. (2) The anæsthetic effect, most marked in cocaine, least so in atropine, which is of no use in diagnosis. (3) The most important is the dilatation of the pupil. To obtain the first effect we use atropine, scopolamine (hyoscine), duboisine, homatropine or cocaine, named in the order of their strength. To produce local anæsthesia cocaine and eucaine have disadvantages which have been overcome by halocaine. To produce the third effect we have had hitherto to resort either to atropine, which is so powerful as to be dangerous, and so lasting as to be disagreeable, or to homatropine, too closely allied to atropine for any practical advantage, or to cocaine, which proves annoying by its slight mydriatic effect or by its primary desiccation of the cornea and subsequent hyperæmia of the conjunctiva. To produce pupillary dilatation without anæsthetic effect or alteration of accommodation the euphthalmin meets the requirements of the practitioner. In 5 or 10 cent. solution it produces no subjective symptoms. It causes only mydriasis, pronounced, but of short duration. Its effect appears earlier in youth than in old age. It is apparently non-poisonous.—*The Chicago Medical Recorder*, 1900, No. 2, p. 126.

Fluid Extract of Lemon in Malarial Prophylaxis.—DOTT. EUGENIO DI-MATTEI notes that after continuous administration of this remedy to the *personnel* of a railway traversing a malarial district, the attacks of malaria regularly diminished, the fever was milder, and its duration shorter. The percentage of instances of malaria per one hundred persons was in 1890–1894, 66; 1895–1898, 32; while in the year 1898 it was only 25.—*Gazzetta degli Ospedali e della Cliniche*, 1900, No. 3, S. 31.

Aneurism Treated by Subcutaneous Gelatin Injections.—DR. THOMAS B. FUTCHER quotes Lancereaux as follows: The gelatin solution is made by dissolving a drachm of white gelatin in six and two-third ounces of normal salt solution and sterilizing thoroughly at 180° F. The flasks are kept at 100° F. No pain should follow injection. With antiseptic precautions there is no local or general reaction. Absolute rest should follow injection, and palpation of the aneurism should not be practised. Injections at intervals of six to eight days; fifteen or twenty are necessary to effect a cure. Injections are to be made into the subcutaneous tissue of the thigh and never into the aneurism or near it. A proper diet is imperative, and a strict milk diet is preferable; fruits and leguminous foods may be permitted. Iodides and nitrites (vasodilators) are indicated. Three of five patients were cured. Those cured had sacculated aneurisms. The other two showed diffuse dilatation of aortic arch (Lancereaux). Conclusions from nine patients recently treated by this method are: 1. In no instance was the aneurism cured, though diminution in size in one patient was remarkable. 2. In seven of the nine patients there was marked diminution in the subjective symptoms referable to the pressure of the aneurism. 3. The subcutaneous injection of gelatin solution does not materially increase the coagulability of the blood. 4. The injections are very painful, pain being most intense about six hours after injection. 5. There is frequently elevation of the temperature. Two to four hours after the injection there were distinct chills with temperature as high as 105° F. There was no local suppuration, and in only one instance did a local reaction follow. 6. Though the writer can report no patient cured, he recommends further experimentation with this method of treatment.—*Journal of the American Medical Association*, 1900, vol. xxxiv., p. 204.

Naphtalin and Oxyuris Vermicularis.—DOTT. AGOSTINO SORINI gives a preliminary dose of calomel, and then for a week twenty-two grains of the remedy each day. At the end of the second week no worms were found, and the feces were free from them during about two months. Care should be taken (1) that the remedy is pure; (2) to forbid fats and alcohol, in which it is soluble; (3) not to use a too large dose and to interrupt from time to time its administration to avoid untoward phenomena from kidneys, bladder, and eyes, such as have been pointed out by various observers.—*Gazzetta degli Ospedali e della Cliniche*, 1900, No. 6, p. 52.

The Treatment of Ulcers of the Leg.—DR. KARL STEINER recommends crurion (chinolin-bismuth rhadanate), which possesses the chemical formula of $(C_9H_7N.HSCN)_2\ Bi(SCN)_3$. This occurs as a reddish-yellow powder of a somewhat pungent odor, insoluble in alcohol, ether, and water. On cleansing the ulcer the powder is dusted on. Should the burning pain following its application be severe it may be diluted with an equal amount of starch. Under this treatment the ulcers rapidly heal and surgical interference becomes unnecessary.—*Therapeutische Monatshefte*, 1900, Heft 1, S. 22.

Bromoform.—MR. WILBUR L. SCOVILLE presents the following as a mixture containing practically no alcohol, susceptible of accurate dosage, and changes in dosage are possible without altering the proportion of the other ingredients: Bromoform, 1; tincture of tolu, 2; mucilage of acacia, 4; syrup, 8; peppermint water, 32. To prepare this the mucilage is placed in a bottle, an equal volume of syrup added, then the bromoform and tolu, in portions, shaking well after each addition. To this thin emulsion add the rest of the syrup and mint water, with agitation. The above formula contains two minims of bromoform in each teaspoonful. To eliminate alcohol absolutely the syrup may be employed in place of the tincture of tolu.—*Pediatrics*, 1900, No. 2, p. 76.

Therapeutics of Heroine.—DR. MORRIS MANGES describes the drug as a white crystalline, odorless powder, bitter and alkaline. It melts at 340° F., and is insoluble in water. Solutions are easily obtained by the addition of a few drops of an acid. Heroine, chemically, is morphine, in which both hydrogen-hydroxyl atoms have been replaced by the acetyl radicle $OC.CH_3$, thus forming the diacetic ester of morphine. Heroine hydrochloride is a neutral salt soluble in two parts of water. Except that its melting-point is much higher, its physiological properties are as for heroine itself. Triturated tablets are the best form for administration, or in solutions with a few drops of acetic acid. The initial dose should never exceed one-twelfth of a grain for weak individuals, and for aged patients the dose should be lessened; for children the same precautions are necessary as for morphine. When immediate results are requisite the hydrochloride given hypodermatically is satisfactory. Watery solutions are used, 2 per cent. solutions in doses of four to eight minims (twelfth to a sixth of a grain). For internal use the dose of the hydrochloride is somewhat larger. Both heroine and its salt can be given in combination with other drugs, the only incompatible being apomorphine. Alkalies must not be added to solutions of the salt. The drug has been found useful as an anodyne in neuralgia of the trifacial nerve, enteralgia, and hemicrania. After prolonged use the dose requires to be increased somewhat. No bad effects have been reported from its use even in advanced cardiac disease. In painful affections it is inferior to morphine and codein. In irritating lesions of the respiratory tract it is decidedly inferior to the other alkalies. In dyspnœic conditions heroine acts on the respiration as does digitalis on the heart. Asthma is much benefited. Sometimes expectoration is lessened, and Leo recommends the addition of iodide of potash. This combination is very effective. Hypodermatic injections of heroine hydrochloride cause no bad local effects if the usual precautions are observed. Injections were painless. Untoward effects followed in two instances—namely, nausea, depression, and vertigo, lasting a short time. Sedation following these hypodermatic injections is marked in a great variety of affections. The drug is useful in the cure of morphinism. It is substituted for morphine, which is wholly withdrawn, and then the dose of heroine is reduced gradually. No digestive disturbances follow. A few instances of constipation are reported, and for such patients half a grain of cascara sagrada may be added to each tablet. For its local soothing effect heroine can be applied topically on tampons in glycerin solutions or in vaginal suppositories (sixth to a quarter of a grain in cocoa butter). Pain is much lessened in a few minutes. The effect lasts a full day or more, though the tampon be retained but a few hours. In pertussis it is invaluable (Goldmann). In influenza heroine shortens the course and lessens the tendency to bronchopneumonia. It may be administered with a mild expectorant.—*New York Medical Journal,* 1900, vol. lxxi., p. 51.

Tannigen.—DR. CARL MANASSE claims excellent results from the use of this remedy in intestinal catarrh. For nurslings, two and one-half grains; for older children, four to five grains, three or four times daily, arrest the diarrhœa, and in three or four days the discharges become normal. Its use is claimed to be without untoward effects. Eighteen instances in support of this statement are cited.—*Therapeutische Monatshefte,* 1900, Heft 1, S. 27.

The Therapy of Cacodylic Acid.—DR. A. GAUTIER gives the following formula: Acid cacodylic, 75 grains (this to be exactly saturated with sodium carbonate); then add cocaine hydrochlorate, 0.5 grain; creosote (dissolved in 2 drachms of alcohol), 5 drops, and distilled boiled water enough to make 3 ounces and 1 drachm. This contains 0.75 of a grain of cacodylic acid in each 15 minims. It is recommended as a substitute for arsenical preparations, especially in phthisis. Subcutaneous injection is painless. All the objections to arsenic, as such, disappear, and in this latent, organic form it can be given, avoiding the various toxic effects resulting from a continued use of arsenic. In addition to the physiological action of arsenic when given in this form, a hyperleucocytosis (especially polynuclear) results, which rids the system of toxic bacteria. The red blood-cells are also increased prodigiously, oxidation is augmented, and thus the blood and tissues are constantly strengthened and renewed.—*Revue de Thérapeutique,* 1899, No. 13, p. 433.

Serotherapy in Tuberculosis.—DR. C. P. AMBLER recommends antituberculous serum in the incipient stage, and especially when there is no mixed infection. The use of the serum is contraindicated in general miliary tuberculosis, in extensive softening, high pulse, marked emaciation, or where there is an hereditary history. Relapses during treatment and afterward are less frequent than when patients are treated with creosote and allied drugs. Night-sweats are more easily controlled. Expectoration greatly increases during the first two weeks, and rapidly diminishes thereafter. When the disease is far advanced or cavity-formation is extensive the beneficial effect on the expectoration is absent. Injections were continued on an average of ten weeks among those patients discharged as cured. A local erythema in half the patients appeared about the point of injection. Rarely the eruption became general. After the first week no local disturbance followed the injections. When enlarged lymphatic glands are present increase in size occurs, and there is marked tenderness; if the glands are not caseous they slowly diminish in size after two weeks, and wholly disappear. A serious symptom is sudden syncope following the injection of the serum. It often lasts as long as two minutes, and occurs in 5 per cent. of all patients. The face is flushed; it is soon followed by pallor, cardiac weakness, nausea, and vomiting—symptoms probably due to the accidental injection of the serum into a small vein, and not to repetition of the injections at the same point. A recumbent position soon restores the patient, and there are no subsequent ill effects. The first injections do not exceed 3 minims, and are gradually increased to 7 or 8 minims; after some days 15 minims are given at a dose, rarely more. Injections are administered daily in the loose skin above the crest of the ilium, using a small hypodermatic needle. Fisch's antiphthisic serum T. R. gave the best results. Antistreptococcic serum, in addition, where there is mixed infection, has not been successful—not influencing the presence of streptococci, which often disappeared without this second serum, and remained in severe infections, though both sera were injected. The conclusion reached is that antituberculous serum is certainly useful in the incipient stage of pulmonary tuberculosis.—*Journal of the American Medical Association*, 1899, vol. xxxiii., p. 64.

Pulmonary Tuberculosis Treated by Aniline Inhalations.—DR. GIBERT gives the following formula: Crystallized carbolic acid, 22½ grains; boric acid and tincture of peppermint, 2 drachms each; pure white aniline, 4 drachms; distilled water, 3⅜ ounces. Deep inhalations of this mixture (from ten to twenty) are to be taken every half-hour, and as many as three hundred in a day. Several spoonfuls of the above mixture are placed in a flask arranged with tubes in such a way that the height of the fluid is not much above the tubes. Agitation of the flask emulsifies the fluid, and the air in the tubes is ready for inhalation. If irritation of the throat results, equal parts of borated water and aniline oil may be substituted. In addition, to cause a general antisepsis, thrice daily three to fifteen drops of aniline in a little water are administered. To keep the temperature regularly low, fifteen to twenty grains of acetanilid are given daily. This medication is indicated when the temperature reaches 99°. Following the inhalations cyanosis of the face and extremities was marked in one patient; the pulse remained slow; there was occasional vertigo. These symptoms soon disappeared. The beneficial results were: pulmonary signs much improved in two weeks, no râles remaining; expectoration was much reduced; appetite became normal;

diarrhœa vanished; weight increased rapidly; temperature was never above 99°. In addition to local antisepsis thus obtained, the stomach is not deranged by drugs and can tolerate more food.—*Le Nouveau Montpellier Medical*, No. 27, p. 27.

Treatment of Acute Broncho-pulmonary Affections.—DR. E. CORGIER calls attention to the value of creosote carbonate, which possesses all the advantages with none of the disadvantages of creosote. Naturally, it is more effective in recent and mild infections. In simple instances of bronchitis with fever, acute pulmonary congestion, pneumonia, or broncho-pneumonia of moderate intensity, especially when the remedy is administered at the onset of the disease, the fall of temperature is rapid, without secondary rise; the auscultatory signs disappear and the general condition improves. In more severe disease—pneumonias or broncho-pneumonias of more intense infection—the effects of the drug are marked. The fall of temperature is rapid, possibly followed by a temporary rise upon later doses. This fall is more sudden in lobular than in lobar pneumonias. It goes without saying that in advanced forms, as gray hepatization, the antiseptic effects may be wanting. After all physical signs have disappeared it is well to continue the remedy for several days. The expectorants, as kermes mineral, or ipecacuanha and the antipyretics, and especially enemas, are discarded. Counter-irritations in the form of baths or wet packs are possibly allowable. Heart stimulants are used if indicated, but cardiac weakness does not forbid the use of the remedy, but rather the contrary. The remedy does not disturb the alimentary tract. In shortening the disease and preventing relapses the dangers of consecutive infection of kidneys and heart, tuberculosis, and gangrene are lessened.—*Inaugural Thesis*, 1899 (Montpellier).

[The extension of the use of this remedy to conditions other than tuberculous, and its use in the treatment of acute infections of the respiratory tract, is worthy of attention. Considerable personal observation emphasizes the plea of the author.—R. W. W.]

The Treatment of Pneumonia.—DR. H. A. HARE believes that abortive treatment is indicated in sthenic patients only, and recommends a hot foot-bath, hot or cold compress on the chest, depending on the temperature, tincture of veratrum viride, in 3 minims, three doses, being given at fifteen-minute intervals, and sufficient Dover's powder to lessen painful cough and to increase diaphoresis. Such treatment is not indicated after the first twelve hours. Early venesection is condemned, as it weakens the patient against exhaustion occurring later, by depriving him of valuable blood. When consolidation has taken place, hyperpyrexia is prevented by cold sponging, with friction, an ice-bag over the heart and to the head. Antipyretic drugs are too depressant; they also decrease vascular tone and the activity of the blood-cells.

Circulatory stimulation, if really needed, is best obtained with digitalis. It often fails because of high fever; if this latter be reduced by hydrotherapy, digitalis is most efficient. Response to the drug is so slow that 10 or 20 minims of the tincture should be given hypodermatically; its effect is so lasting that twelve to twenty-four hours may elapse before repetition is necessary. By this method the shuttle-like pulse of overdoses of digitalis is avoidable. When there is a relaxed and gaseous pulse, tincture of belladonna in 5 or 10-minim doses every four or five hours is useful, especially if the skin be relaxed. Strychnine is indicated when the patient is rapidly sinking, by its action as an irritant to the nervous system. It is to be used freely during this period, and then stopped, for strychnine simply goads the system to increased endeavor and does not aid it simultaneously. For prolonged collapse or tendency thereto, wine of cocoa is valuable. In sudden collapse, strychnine and atropine combined are admirable. Brandy is useful in patients advanced in years. Nitroglycerin is indicated only where the pulse is of high tension; where venous engorgement is great, venesection is much to be preferred. Oxygen is recommended when respiration is difficult; it quiets the patient, largely by its mental effect.—*The Therapeutic Gazette*, 1899, No. 7, p. 445.

Gastro-intestinal Antisepsis.—DR. JAMES MILLS advises in gastro-enteric infections emptying the stomach and cleansing the bowels with laxatives and enemata. Approximately sterile food is recommended. Drugs for intestinal antisepsis must be non-absorbable and non-toxic, in such doses as will cause antisepsis; they must, therefore, be insoluble. Castor oil, bismuth salicylate, iodoform, calomel (which becomes mercuric chloride in the stomach), guaiacol carbonate, and naphtalin are recommended. Salol is valuable, becoming salicylic and carbolic acid under the action of the pancreatic juice. Betanaphtol is preferable, for it is non-toxic. Resorcin is useful. Benzonaphtol has no action on the gastric secretion, and is an excellent intestinal antiseptic, 60 grains daily, in divided doses. Digestion is undisturbed by this drug.—*The Medical Standard*, 1899, vol. xxii., p. 268.

Diphtheria and its Treatment.—DR. BONNEFIU sums up results, after an exhaustive study of statistics, as follows: Isolation of patients and systematic disinfection of wards every fortnight have caused great diminution in the frequency of this disease; this change occurred two years before the introduction of antidiphtheritic serum-therapy, and has been due to the above procedures.—*Journal de Médecine*, 1899, vol. xi., No. 25.

Puerperal Fever and Antistreptococcic Serum.—DR. D. ARTHUR, after using uterine bichloride douches, quinine and perchloride of iron by the mouth, the patient being almost moribund, on the eighth day after delivery injected 150 minims of antistreptococcus serum daily for three days. In nine days eight injections of serum were given, their administration being governed by the height of the temperature. When apyrexia had existed for five days another injection was given; antitoxin poisoning resulted, with a slight urticarial rash, diarrhœa, and rectal hemorrhage. Complete recovery ensued. It is recommended that a single injection be given daily until apyrexia is established.—*British Medical Journal*, 1899, No. 2010, p. 78.

Septicæmia and Antistreptococcus Serum: Rapid Recovery.—DR. J. M. BRUCE, from results with the serum in two instances, concludes: 1. Antistreptococcus serum may succeed when other measures have failed. 2. It may act with great rapidity, all the symptoms disappearing in two days. 3. Success may attend the use of one serum after another preparation has failed, and on this last point much stress is laid.—*The British Medical Journal,* 1899, No. 2010, p. 76.

The Treatment of Syphilis.—DR. D. TAIT bases the intravenous method on the fact that mercury has no effect on the organism until it enters the blood, the leucocytes being the exclusive vehicle and agent of absorption. Mercuric cyanide, 1 part in 100 or 200, and corrosive sublimate, 1 part in 500 or 1000, are generally used. The amount injected daily should be from 15 to 45 grains. The skin over the flexor surface of the elbow is cleaned and the arm is constricted by a rubber bandage. Any prominent vein is chosen, the hypodermatic needle being introduced obliquely; the bandage is loosened. If a medium-sized needle be used, blood enters the barrel and makes certain that the needle-point has penetrated a vein. The patient should feel only the skin puncture. If any of the solution passes into the cellular tissue round about intense pain results, and induration follows, lasting several weeks. Extravasation of blood is avoided by using a needle of not too large calibre. In adipose patients and in women, the veins cannot always be made sufficiently prominent to perform the puncture. No dressing is required [?]. Experiment has shown that no thrombus occurs in the punctured vein. Repetition of puncture in the same vein causes no local or general disturbance. Mercuric cyanide is preferred to corrosive sublimate, as it contains a higher percentage of mercury (80 per cent.). Thus exhibited, mercury appears in the urine in ten minutes, and continues to be present for only thirty-six hours. Blood examination, after small diluted doses, shows an increase of red corpuscles and hæmoglobin, with hyperleucocytosis; with large doses the condition is reversed, hyperleucocytosis immediately resulting. Thus mercurial anæmia may be rapidly controlled. The injection of calomel is to be avoided, for pain, nodules, and suppuration are frequent results, and the amount of mercury thus absorbed is uncertain. It is recommended that the intravenous injections be made daily at the elbow. This method is for exceptional use, when ordinary measures have failed, as in syphilitic glossitis and phagedenism, and where *rapid* mercurialization is required. Tertiary syphilis of the eye, tongue, and nervous system, and primarily malignant syphilis are amenable to this form of treatment. In differential diagnosis intravenous injections are invaluable for their rapidity and accuracy.—*The Journal of the American Medical Association,* 1899, vol. xxxii. p. 1361.

Protargol in Gonorrhœa.—DR. W. L. BAUM, following the method of Neisser, thus recommends the use of protargol: 1. Having determined that the urethritis is still confined to the penile portion of the urethra, instruments are not passed beyond the anterior urethra. 2. If there is posterior urethritis, often where prolonged anterior injections are used, it is unnecessary to inject the posterior urethra. 3. Injections to be given thrice daily, after urination. The fluid is to be retained five minutes in the urethra after the first two injections, thirty minutes after the third. If much secretion is present, six injections, each of five minutes' duration, may replace the latter. 4. After a few days the prolonged retention of injected fluid should be discontinued. The other two are replaced by an injection of a suspension of bismuth or iodoform, 2.5 per cent. each, or boric acid solution, 3 per cent., or zinc sulphate, one-quarter of 1 per cent. When gonococci can no longer be discovered the injections are stopped. It is best to begin with one-quarter of 1 per cent. protargol solution, which is gradually increased to 1 per cent. Chronic gonorrhœa is often much benefited by these mild solutions. The protargol solution is not precipitated by albumin, and penetrates deeply into the urethral tissues. Thus treated fifty patients responded very satisfactorily, there being few complications.—*Medicine*, 1899, No. 7, p. 555.

Myxœdema Treated with "Colloid" Material.—DR. R. J. M. BUCHANAN reports a case treated with colloid material prepared from the thyroid gland according to Hutchinson's formula, each tablet being the equivalent of five grains of the fresh gland. Beginning with 5 grains the dose was gradually increased until 20 grains a day were taken within one month. Dosage was then reduced to 10 grains, and after four months to 5 grains a day. There were no symptoms of thyroidism. Result was a rapid return to health. Complete alopecia was followed by a growth of thick, brown hair. Pulse and temperature became normal. Perspiration returned and the mental inactivity disappeared. Body-weight diminished. Drowsiness vanished, and appetite increased. The patient continued to take 5-grain doses daily, and remains in excellent health. With the loss in weight there was an increase in urea excretion at first, and then, though the weight continued to decrease, the urea diminished in quantity, and at this time the maximum dose of "colloid" was being administered.—*The British Medical Journal*, 1899, No. 2007, p. 1460.

Septicæmia Treated with Normal Salt Solution.—DR. C. E. EDSON states that the patient was subject to follicular tonsillitis, which, in the present instance, was replaced by the typical sore-throat of streptococcus infection. Constitutional symptoms followed, with aggravation of pain in the joints. Salicylates, alkalies, and anodynes were ineffectual. After a fortnight, the conditions all gradually growing more grave, sixteen ounces of hot sterilized salt solution were injected into loose tissues about the breast. Increase in urine was noticeable. Next day twenty-six ounces were injected into the median cephalic vein, and later eighteen ounces were injected under the pectoral muscle. A last injection of fourteen ounces was given two days later. Convalescence slowly appeared, and recovery was complete. Attention is directed to the great relief of pain following the injections. This, and improvement in nervous symptoms, resulted after each injection. Later the intense pain and restlessness would recur. Until the first administration of saline solution the patient was rapidly failing. Free diuresis and diaphoresis occurred after each injection. Apparently as beneficial results followed hypodermoclysis as venous infusion.—*Boston Medical and Surgical Journal*, 1899, vol. cxli., p. 83.

Diet in Typhoid Fever.—DR. R. W. MARSDEN recommends milk only at first. When the infection is mild on successive days bread and milk, with custard, fish with mashed potato, chicken, bread and butter, and, finally, minced meat are allowed, nothing further until convalescence is well established. Patients gravely ill should be given only peptonized milk with meat-juice until well into the period of convalescence. Slight exacerbations of temperature and occasional irregularities of the bowels are not indications for the withdrawal of food. The patient's own wish is an important guide. The typhoid state being passed, and the tongue being moist, food is indicated when asked for. The various injurious consequences of a too early administration of solid food have been stated as (1) Diarrhœa. Etiology being considered, it is probably proportionate to the severity of the attack; it has not a necessary relation to the extent of the intestinal lesions; it is worse when the colon is ulcerated; it is due to the associated catarrh. The last factor is the only one capable of influence by feeding; the occurrence of vomiting, unusual abdominal fulness or uneasiness, and increased action of the bowels are supposed to result. In two hundred patients fed according to the above plan there was total absence of vomiting and abdominal discomfort. In only three patients diarrhœa increased, but it apparently was not due to feeding. (2) Hemorrhage. It is more common in the severe infections, being due to the separation of the sloughs or to the presence of fungating sloughs, or to the associated hyperæmia. In the same series of cases 3 per cent. of hemorrhage is reported, none being fatal. Most copious hemorrhages are met with chiefly in the worst attacks with much diarrhœa, and in such instances an advance to solid food has not been made. (3) Perforation. In the writer's series it did not occur, yet this complication is supposedly most prevalent as a result of the use of solid food. The only connection is through the mechanical irritation of ulcers. (4) Pyrexia. It is well recognized that very great variations in temperature may occur in patients who are kept on a milk diet. An exacerbation at the time of giving solid food is most often a coincidence, unless the change has been made too suddenly. If the exacerbation is temporary and unaccompanied by other symptoms, starvation diet is not justifiable. (5) Relapses occur. After irregular intervals and if it cannot be ascribed to the giving of solid food, a relapse is due to a reinfection of the blood, for intestinal lesions are found far advanced out of proportion to the obvious clinical relapse. Therefore, there is less chance of its being due to solid food when the relapse immediately follows than where a fortnight has intervened after taking solid food. To recommend the above alteration in the typhoid dietary are more rapid recovery, diminished risk of surreptitious feeding, lessened tendency to bolt food when allowed, without mastication, and diminished tendency to asthenic complications, such as post-typical anæmia, gangrene, etc.—*The Lancet*, 1900, vol. i. p. 90.

Ichthalbin.—Dr. Samuel Wolfe finds that this substance, which is ichthyol albuminate, clings closely to mucous membranes, and thus gives a prolonged application. In diphtheria seven to fifteen grains have been blown into the throat at intervals of three to four hours with excellent results. In order to obtain a further action upon the gastric and intestinal mucous membrane, tablets, each containing five grains, may be employed, of which four to ten may be taken daily. The following conclusions are presented: 1. Ichthalbin is non-toxic and non-irritant to the stomach, admitting, on this account, practically unlimited dosage. 2. It is an intestinal antiseptic, a stomachic, and an aid to constructive metabolism. 3. It has no odor and almost no taste, properties which make it easy of administration without combination or disguise. Whenever ichthyol is indicated for local use, but when a dry, odorless powder is more easily applicable or otherwise preferable, ichthalbin should be used. Internally, the latter is preferable because it will not cause irritation, will not nauseate, is more pleasant to the taste, and can be administered in more efficient doses. In phthisis, secondary and tertiary syphilis, chronic rheumatism, and septic and pyæmic conditions, it is among the most available drugs. In all conditions of the mucous membranes where hyperæmia, increased and perverted secretion, or suppuration appears, it is decidedly efficient. In florid and inflammatory dermatoses it is among the best internal remedies.—*Merck's Archives*, 1900, No. 1, p. 9.

The Use of Ichthyol-vasogen in Diseases of the Joints.—DR. G. EDLEFSEN notes that inunction is important so that the medicament may penetrate to the deeper tissues. An instance of presumably tuberculous tarsus is cited in which complete relief of disability was obtained in a few weeks by the use of this substance (10 per cent.) twice daily. In monarticular rheumatism, particularly in recent disease, good results are obtained. Energetic massage is important. In the polyarticular variety there is marked lessening of the pain and increased mobility of the affected joints. Should the rubbing increase pain the older methods of painting on the alcohol-ether-ichthyol solution may be resorted to. Internal use of ichthyol in pill or capsule is advantageous. For this method the claim of a real addition to our therapeutic resources is made.—*Therapeutische Monatshefte*, 1900, Heft 1, S. 19.

The Action Upon the Renal Function of Hypnotics Associated with Diuretics.—DOTT. T. PIROCCHI, having reviewed the literature, attempts to ascertain from laboratory investigation (1) if chloral increases the diuretic power of other substances reputed to be capable of promoting a greater secretion of urine; (2) if other narcotics, not studied from this point of view, can, united with diuretics, produce the same effect as chloral; (3) to establish what may be the mechanism of such action; and (4) how much of the diuretic effect of drugs known as diuretics is really due to them, and how much to the narcotics used with them in experimental work. The diuretics chosen were caffeine, potassium nitrate, sodium nitrate, diuretin and arbutin; the hypnotics were chloral and duboisine sulphate. The conclusions reached were that chloral constantly increased the diuretic action of caffeine and arbutin, sometimes, but not always, that of diuretin and potassium nitrate, but has no effect in conjunction with sodium nitrate. As to whether other narcotics increase the action of diuretics as does chloral the researches of Cervello and Lo Monaco prove this to be true for curare and paraldehyde, and these observations add duboisine sulphate to the lists. These prove that duboisine sulphate always increases the diuretic action of caffeine, sodium nitrate, diuretin, and arbutin, and sometimes that of potassium nitrate. The mode of action of the associated hypnotic and diuretic is explained by a new hypothesis which will be presented in a future study. To determine how much diuretic effect is obtained as diuretics, *per se*, and how much comes from the associated narcotic, the following statements are made: Caffeine, itself a weak and uncertain diuretic, is reinforced by narcotics. All of the diuretic effect attributed to sodium nitrate, potassium nitrate, and arbutin is due to the narcotic. A part of the diuretic effect of the diuretin is due to the narcotic; but, on the other hand, this remedy acts vigorously upon the renal secretion. So far as these experiments go there is practical advantage in the following associations: chloral and caffeine, chloral and arbutin, duboisine sulphate and diuretin, duboisine sulphate and sodium nitrate, duboisine sulphate and arbutin.—*Il Policlinico*, 1900, No. 1, p. 51.

Chloretone a Safe Hypnotic.—DR. W. M. DONALD discusses trichlor-tertiary butyl alcohol or chloretone. It is made by adding caustic potash to equal weights of chloroform and acetone. It occurs as white crystals, with the odor of camphor. Slightly soluble in water, it easily dissolves in alcohol and ether. The tablet form is best for internal administration. It is especially recommended as a hypnotic and local anæsthetic. There are no depressing after-effects, and it is safe to administer large doses. Ten to fifteen grains, repeated in two hours if necessary, is the usual dose. One hundred and twenty grains have been taken in a single day. Profound narcosis followed for forty-eight hours; then inco-ordination of muscles, with diarrhœa. Mild general anæsthesia (absence of response to pin-pricks) lasted several days.

Nearly a week elapsed before the patient ceased to show effects from the drug. The pulse remained slow. Respiration was deepened, but the rate remained normal, likewise the quality and rhythm. Toward the end of the long sleep temperature became subnormal from exhaustion. Sleep was continuous for nearly a week, except when the patient was roused for nourishment and baths. During these periods he became partially conscious, later referring to incidents occurring during these intermissions. Gastric irritability was due as much to fasting as to the drug.—*The Therapeutic Gazette*, 1900, vol. xvi., No. 1, p. 18.

OBSTETRICS.

UNDER THE CHARGE OF

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Eclampsia followed by Toxæmia in a Succeeding Pregnancy, with the Death of the Ovum.—In the *Transactions of the Obstetrical Society of London*, 1899, vol. lxi. p. 151, GRIFFITH and EDEN report the following case:

The patient, a multipara, had eclampsia at the eighth month of her third pregnancy. Labor was induced by the introduction of the bougie, and the patient recovered. She became pregnant eighteen months afterward, and